

REMARKS

Claims 22 and 33 have been canceled. Claims 17, 20, 23, 24, 31, 32, and 34-36 have been amended. Applicant requests entry of the amendments and reconsideration of the rejections in light of the following remarks. Claims 17-21, 23-29, 31, 32, and 34-36 are pending.

Discussion of Claim Objections

Claims 31 and 32 are objected to for certain formalities. Applicant respectfully submits that Claims 31 and 32 have been amended to address the informalities. Accordingly, Applicant respectfully requests withdrawal of the objections.

Discussion of Claims rejected under 35 U.S.C. § 102(b)

Claims 17, 23, 24, 31, and 32 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Yamakawa *et al.* (US Patent No. 6,633,319). Yamakawa discusses an image recording device for recording images onto reversible recording mediums such as a thermal liquid crystal compound. See Abstract.

Applicant respectfully submits that the cited art does not disclose the combination of elements recited in Claim 31. For example, the cited art does not disclose a laser marking system configured to mark paper. Instead Yamakawa discloses marking a sheet of multiple layers none of which is of paper.

Yamakawa also fails to disclose a laser light emitting source comprising an array of individually addressable lasers arranged for simultaneous marking of a plurality of distinct points of an exposed surface. Yamakawa appears to disclose a laser light emitting source (see figure 19 or figure 16) which comprises an array of lasers. These do not, however, simultaneously mark a plurality of distinct points of an exposed surface. The polygon mirror 34 is provided to focus the laser beams on a single point at a time as shown in figures 16 and 19.

Yamakawa also fails to disclose a system where paper is colored primarily by thermal reactions caused by exposure of a plurality of distinct points to emitted light. The reactions are primarily chemical rather than thermal in Yamakawa.

Furthermore, Yamakawa fails to disclose means for modulating at least one of a duration and an amplitude of the emitted light in order to affect the extent of color change. Instead, Yamakawa states that the lasers can be modulated according to the description of figure 16.

However, the modulation is concerned with controlling which one of the laser diodes is employed to generate a level of radiation capable of determining the colour to be written on the point where the beam focuses.

Yamakawa also fails to disclose paper being sensitive to light of at least one of the infra red and near infra red spectrums. Instead, Yamakawa discusses the recording medium in column 10 lines 41-51 where intermediate and protective layers of the recording medium incorporate an infrared absorbent which provides the function of converting infrared light into heat. The heat creates hot spots which affects adjacent recording layers 4 and 54. In some embodiments of Claim 31, in the infrared or near infrared absorbent paper, hot spots are achieved which cause the paper to change color particularly when employing an infrared or near infrared array of lasers. Printing is achieved by employing a relatively simple system with infrared absorbent paper.

Accordingly, at least for these reasons, Applicant respectfully submits that Claim 31 overcomes the cited art and is, therefore, in condition for allowance. In addition, Applicant respectfully submits that Claim 32 is also in condition for allowance at least because of reasons similar to those discussed above with regard to Claim 31. In addition, Applicant does not necessarily agree with the characterization and assessments of the art with respect to the dependent claims, and respectfully submits that the dependent claims are in condition for allowance at least because of the features they include from the independent claims from which they depend and because of their own features.

Regarding Claim 17, Applicant respectfully submits that the cited art does not disclose a heater configured to heat said exposed surface to a temperature close to a marking threshold of the exposed surface prior to the exposed surface being exposed to the laser light. Instead, the preheating envisaged in Yamakawa is concerned with heating the substrate sufficiently to erase the recording medium. In contrast, the heater in some embodiments of Claim 31 is to heat the exposed surface to close to its marking threshold but not beyond let alone considerably beyond as detailed in Yamakawa.

Regarding Claim 23, Applicant respectfully submits that the cited art does not disclose an array of micro lenses located between the lasers and the plurality of distinct points on the paper. Instead, Yamakawa employs a polygon mirror to focus the light beams on a single point on the substrate.

Regarding Claim 24, Applicant respectfully submits that the cited art does not disclose at least one optical element located between the lasers and the paper, the at least one optical element incorporating at least one of a wave guide, a graded-index lens, and a diffractive optical element.

Discussion of Claims rejected under 32 USC § 103(a)

Claims 17-29 and 31-36 are rejected under 32 USC §103 (a) as being unpatentable over Goto *et al.* (U.S. 5,909,232) in view of one or more of Yamakawa, De Bock *et al.* (U.S. Patent No. 5,893,018), Goldberg (U.S. Patent No. 4,383,261), and Hilbert (U.S. Patent No. 7,256,803),

Applicant respectfully submits that the cited art does not individually or collectively disclose all of the features of Claim 31. For example, the cited art does not disclose at least those features of Claim 31 discussed above with regard to Yamakawa alone. Accordingly, Applicant respectfully submits that Claim 31 overcomes these combinations and is in condition for allowance. In addition, Applicant respectfully submits that Claim 32 is also in condition for allowance at least because of reasons similar to those discussed above with regard to Claim 31. In addition, Applicant does not necessarily agree with the characterization and assessments of the art with respect to the dependent claims, and respectfully submits that the dependent claims are in condition for allowance at least because of the features they include from the independent claims from which they depend and because of their own features.

Conclusion

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that new claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any Currently Amended or other broader or narrower claims that capture any subject matter supported by the present disclosure, including

subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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